2009 Virginia Environmental Education Conference

Draft schedule

Wednesday, September 9, 2009

8:30am – 9:30am	Arrival and Meet the VRUEC Leaders (Student Center)
9:45am - 10:00am	Welcome, Discuss Agenda for the Day (Ogden Center)
10:00am – 10:45am	Governor Timothy Kaine, invited (Preston Bryant Confirmed) (Ogden Center)
10:45am – 11:00am	Break
11:00am – 11:45am	General Session 2 (Panel from HU –Dr. James M. Russell, III and Dr. M. Patrick McCormick (Ogden Center)
11:45am – 12:00pm	Walk to Student Center
12:00pm – 1:30pm	Lunch and Awards (Student Center Ballroom 1 and 2)
1:30pm – 2:15pm	Break out Session 1 (Student Center)

Technology:

- STEM and EE (Virginia Tech)
- Using Augmented Reality to teach Environmental Education (Radford University)
- Chesapeake Live! Using Distance Learning (NOAA Chesapeake Bay Office)
- Studying Chesapeake Bay Through GIS and Satellite (Hampton City Schools)
- Cyber Nature Expanding Environmental Education (Virginia Cooperative Extension)

2:15pm – 2:30	Break
2:30pm – 3:15pm	Break out Session 2 (Student Center)

Diversity:

- The Reedy Creek Watershed Protection Audit (Alliance for the Chesapeake Bay)
- Developmentally Appropriate Supervision (Bowie State University)
- Culture and Commerce (RiverWorks Discovery)
- Chesapeake Field Scope (Chesapeake Bay Foundation)
- Thomas Berry Educational Center (Francis Emma Inc.)

3:15pm – 3:30pm	Break
3:30 pm – 4:15pm	Break Out Session 3 (Student Center)

Out of the Box Techniques & Programming:

- Learning Environmental Gadgets (Greenbrier Intermediate School)
- Waves, Words & Wonder: Building Science Literacy (VA Aquarium & Marine Science Center)
- Pearls are a River's Best Friend (Lynhaven River NOW)
- Hands-On Field Trip Production (VCE – York County 4-H Environmental Programs)
- Taking Lemons and Making Lemonade (VA DEQ, VADCR)

4:15pm – 4:30pm	Break
4:30pm – 5:15pm	General Session 3 - Akiima Price (Ogden Hall)
5:15pm – 5:30pm	Break and return to Student Center
5:30pm – 6:00pm	Round Tables/Exhibits and Reception
6:00pm – 7:00pm	Evening Presentation Nancy Hugo/Jeff Kerwin – Remarkable Trees (Ogden Hall)

Speakers:

Dr. James M. Russell, III, Won Science of the Year. Professor at HU. Worked with NASSA AIM Mission. Studying clouds. www.nasa.gov/mission_pages/aim/russell_bio.html

Dr. M. Patrick McCormick, Calipso Project. Studying clouds and aerosols. Professor at HU. Also won Science of the Year award. Both Drs. Russell and McCormick studying pollution from air activities. www.nasa.gov/mission_pages/aim/mccormick_bio.html

Akiima Price – Chief of Education and Programs at the New York Restoration Project (NYRP). NYRP restores, develops, and revitalizes underserved parks, community gardens, and open spaces throughout New York City. For the past 14 years Akiima has worked with numerous environmental organizations throughout her hometown of Washington DC, creating and implementing innovative programs that connect low income residents with the natural environment. Akiima was brought on board in September 2007 to redevelop the direction of education and community programs at NYRP.

Descriptions of Breakout Sessions:

Technology:

STEM and EE (Virginia Tech)
Many VT-STEM programs incorporate environmental education o provide real-world applications of STEM (Science, Technology, Engineering, and Math) learning. Students often need experiences that have personal meaning or direct usefulness in order to take an interest in school. When students study their local air quality, schoolyard habitats, and watersheds, it engages them in learning about where they live. They get to use a range of tools, technologies and strategies to explore, learn, and share information. Assessment of effectiveness and communication of their learning with others are important parts of the environmental education continuum.

Using Augmented Reality to teach Environmental Education (Radford University)
The purpose of the Radford Outdoor Augmented Reality (ROAR) Project is to understand how elementary, middle and high school teachers and students de3scribe teaching and learning within two participatory "augmented reality" (AR) simulations designed to teach science and science literacy skills. In AR, students carrying mobile wireless devices through real world contexts engage with virtual information and experience superimposed on physical landscapes. Our findings indicate that students and teachers reported the most motivating and/or engaging factors were 1) collecting data outside: 2) participating in teams with distributed knowledge, positive interdependence, and professional roles; and 3) involving previously disengaged students. Limitations at this state of AR development include 1) hardware and software issues, and 2) logistical support and lesson management. Our proposed presentation will explore how AR can be used to teach and learn environmental education issues.

Chesapeake Live! Using Distance Learning (NOAA Chesapeake Bay Office)
Based off the nationally successful Estuaries Live initiative, Chesapeake Live leverages real-time technologies and live telepresence to enhance place-based education and bring North America's largest estuary into the classroom. Students learn about sea level rise, storm water management, oyster restoration, sturgeon tracking, and more form a host of Bay content experts. Learn about the Chesapeake Live 2009 pilot in Hampton Roads, and where this watershed initiative is going next!

Studying Chesapeake Bay Through GIS and Satellite (Hampton City Schools)
Participants will have the opportunity to explore our world from the unique perspective of space and get the "big picture": of how environmental education can be enhanced by incorporating Geographic Information Systems. GIS link information from databases and maps to create visual representations of information that become powerful teaching and analysis tools. Using Blue Marble, Google Earth, ArcMap, and My World GIS software, explore and discuss the importance of spatial understanding in facilitating deeper awareness and study of Earth Systems Science and Environmental Education. Satellite imagery will be used to perform time change analysis on vegetation and population change and allow participants to observe and evaluate their impacts on our environment.

Cyber Nature Expanding Environmental Education (Virginia Cooperative Extension)
Face it, in the Environmental Educator's Utopia we all have a 3:1 nature guide to student ratio and as we scamper excitedly through a lush 72oF rainforest (where no bugs are biting, yet there are 1000s to observe) down to a stream, through a cave, and up to the 12000' mountain peak (that we can ascend in 30 minutes with minimal gear and no hyperventilating students). And we can provide this for all students regardless of their school's budget, their geographic location, SOLs and soccer practice. Alright, now snap out of it! Though we cherish the times when we can get small groups intimately involved in genuine outdoor experiences, most of the environmental learning we do (even as adults) is through the media. The internet is providing more interactive ways for students to learn and observe nature in the time and space they have available, which can greatly optimize their outdoor experiences when they have them. This presentation will not only present some of the many online resources available, but will demonstrate how these "bits and pieces" can be assembled into an easily navigable and coherent ready-to-use teaching tool.

***Diversity*:**

The Reedy Creek Watershed Protection Audit (Alliance for the Chesapeake Bay)
Excessive stormwater has been identified as one of the greatest conservation challenges in the Chesapeake region and Virginia. Working with residential properties owners in developed communities also poses numerous challenges. Working with the newly formed Reedy Creek Coalition, the Alliance for the Chesapeake Bay has created a 3rd party watershed protection audit for homeowners. The audit program relies on directly engaging homeowners and developing a site specific conservation plan. By participating in this effort, homeowners will become aware of their environmental footprint and be able to access resources for best practices implementation identified through the site specific conservation plan.

Developmentally Appropriate Supervision (Bowie State University)
This program addresses issues in human development that are important to working effectively with adult learners. The program will look at stages of adulthood and teacher development for the purpose of working effectively with teachers to increase teacher retention and promote staff development. This workshop is particularly effective for understanding issues that are specific to beginning teachers.

Culture and Commerce (RiverWorks Discovery)
A strong emphasis of commerce and culture on America's waterways. Our program highlights activities/lessons for the high school level student. A formal education module that was developed by the NEED Project for use in the classroom.

Chesapeake Field Scope (Chesapeake Bay Foundation)

Thomas Berry Educational Center (Francis Emma Inc.)
Reaching diverse audience is the vision and mission of the Thomas Berry Educational Center. As a multipurpose, multiage, and multidisciplinary place, the services the Center provides promote ecological and educational programs of quality and excellence for adults and youth with the goal of empowering community reflection on the mystique of place. This presentation will discuss the establishment of the Center, its vision and mission, and the programs it envisions.

Out of the Box Techniques & Programming:

Learning an Environmental Gadget with each Other (Greenbrier Intermediate School)
Learn how students use LEGO's to investigate environmental topics and share their research with the community. Conference participants will learn about FIRST LEGO League and how it encourages students to use a LEGO gadget to learn about the environment. Previous challenges will be shared as well as details about this year's topic on transportation.

Waves, Words & Wonder: Building Science Literacy (VA Aquarium & Marine Science Center)
The Virginia Aquarium & Marine Science Center, the Virginia Beach Ready to Learn Office and the Virginia Beach Public Library collaborated to develop Waves, Words & Wonder, a series of literacy rich, environmental education programs for at-risk four-year-olds. This session will focus on how the educational components build on each other throughout the school year to support the child, the family and the teacher in increasing children's reading and science readiness skills and enhancing family involvement in their child's education.

Pearls are a River's Best Friend (Lynhaven River NOW)
In an effort to stimulate interest in watershed conservation with all citizens of the Lynnhaven watershed, Lynnhaven River NOW supports the Virginia Beach Schools through a beneficial partnership offering training to teachers, classroom programs for students K-12, and advisory support for environmental projects. Ultimately, those schools that succeed in incorporating watershed education and Lynnhaven River stewardship into their curriculums are recognized with the Pearl School Award. This award designates its recipient as a leader in environmental and watershed education. The program finished the 2008-2009 school year with an outstanding 23 schools offering exceptional environmental programming. Virginia Beach Schools showed its value in the program by designating the Pearl School Award as a requirement for receiving the school system's Sustainable Schools Award. The successes of this multi-layered partnership with Virginia Beach Schools affect students at every level and even bring the conservation message into students' homes. As these young stewards learn what they can do to improve water quality and protect their Lynnhaven and its surrounding waters, they truly become the Pearls of the Lynnhaven River.

Hands-On Field Trip Production (VCE – York County 4-H Environmental Programs)
Present a recap of the Estuaries to Oceans Field Trip we produced in April for the Fifth Grade Class at Seaford Elementary School. Conduct one activity done during the field trip. Provide a retrospective of why and how we produced the field trip. Discuss our community partnerships, funding, and evaluation methods.

Taking Lemons and Making Lemonade (VA DEQ, VADCR)
Total Maximum Daily Load is the process by which the State studies and improves waterways that do not meet water quality standards. A TMDL water quality study sets a pollution budget to look at sources of pollution going into the stream. The next step is to write a TMDL Implementation Plan detailing practices that will clean-up the creek to meet water quality standards again. A key component of the federally mandated TMDL process and its state required follow-up Clean-up Plan is public engagement. Public meetings are supposedly given to educate and involve the general population living in the watershed. Smaller, more focused Technical Advisory Committee and Working Group meetings are hypothetically designed to allow

for citizen input on the minutia and details of the TMDL Plan. However, the implementation of the process is surprisingly unfriendly, highly technical and only marginally encourages public participation. In recent projects, the Valley Regional Office of the Virginia Department of Environmental Quality and the Shenandoah Watershed Field Office of the Virginia Department of Conservation and Recreation have worked together to increase citizen participation in the TMDL implementation Plan process through creative and innovative adapt ions. In this presentation, VADEQ and VADCR will jointly present the adapt ions and inventions attempted, share the triumphs and the tribulations, and gather input from the audience on how to best engage citizens for the cause of water quality improvement.

Thursday, September 10, 2009

Field Trips: